

Specification as Amended:

On page 1, before line 3, please insert the following heading:

✓ Background of the Invention

On page 1, please replace the paragraph contained in lines 15-28 as

follows:

B' It is also known that one can systematically use certain electrical characteristics with certain substances between the electrodes and an electrode structure with proper dimensions, whereby the complex resistance of such a surface structure acts as a transformer for voltage and current. Particular examples of this are the resistances and capacitors for thick and thin layer technology, whose adjustment to the final value is often achieved through the fine adjustment of the surface structure. This is done, for example, using systematic incisions with a laser. For this, the electrode material and the substance between them are suitably selected. In particular, air can be selected as a dielectric.

On page 4, please delete the paragraph contained in lines 31-33.

On page 5, before line 1, please insert the following heading:

Summary of the Invention ✓

On page 5, please replace the paragraph contained in lines 1-26 with the following:

B²

The essence of the invention is that a number of conductive islands (passive electrodes) are applied on any given dielectric substrate, as a two-dimensional area arrangement, between two connection electrodes and these islands are not or are not essentially connected with one another and whereby relative to the complete filling of the interspace of the connection electrodes with the substance of the passive electrodes the conductance of the measuring probe or of the function element is changed. The total conductance of the measuring probe is dependent on the specific portion of the area of the passive electrodes. Because the two-dimensional distribution of the substance of the passive electrodes is only one dimension above that of a possible one-dimensional current path, the possibility of such a formation is very low. The remaining area of the substance represents a multiple non-contiguous area, in which the current paths spread in the area between the islands and around the islands. If when using a thin carrier, for example a foil, this is included in the flux, the islands influence the area of the carrier near to the surface structure and thus also the resulting total conductance. The advantages of such an electrode structure are found in particular in the high flexibility of the representation of the conductivities of the electrodes and/or of the substance by the conductance of a measuring probe or of a function element.

On page 7, after line 5, please insert the following heading:

✓ Brief Description of the Drawings

On page 7, before line 14, please insert the following heading:

✓ Detailed Description of the Preferred Embodiments

Please amend page 13 as follows:

Abstract of the Disclosure

An electrode arrangement for an electrical component and carrier for sensors is applied on a substrate (1) as a surface structure of suitable dimensions. This arrangement includes two electrically conducting electrodes (2) not electrically connected with one another. A high flexibility concerning the representation of the conductivities of the electrode arrangement and/or of the substance of a sensor-active layer is provided and represents these through the conductance of a measuring probe or a function element and is simple and economical to manufacture. On a dielectric substrate (1) between two electrodes (2), a number of conductive islands (3), which are not essentially connected with one another, are positioned as a two-dimensional area arrangement.

The abstract of the disclosure, as amended, is included herewith on a separate sheet as Attachment A.

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